



A STUDY INTO THE FEASIBILITY OF CONSUMERS TRIGGERING FACTORY ROBOTS TO START PRODUCTION OVER THE INTERNET TO OPTIMIZE THE CURRENT PURCHASING SYSTEM

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ABSTRACT

This paper aims to study and justify the feasibility of developing a more efficient purchasing system due to the inefficiencies in the current system which is an economic waste and source of global warming. Today if products are not sold they are dumped by supermarkets, wholesalers, warehouses and factories. All this happens because of incorrect demand predictions. But if products are manufactured only after their credit cards has been debited there will not be a problem of incorrect demand prediction all along the supply chain. This will lead to a purchasing system where customers deal directly with factories, which is favorable to producers as well as customers because cost will go down and wastages will reduce.

Keywords: *Factory Robots and Purchasing System.*

1. Introduction

Systems are currently available, whereby as soon as a customer, somewhere in the world credits money for a product, humans and software processes this orders and gives instructions to other humans in factories to produce the product. Many high technology factories mine data from the likes of Google, Facebook and Twitter to predict demand levels [1]. An improvement to such a system is to get the robots to manufacture the product as soon as the money is credited from customers' credit cards.

The reduction of wastage all along the line from supermarkets to factories plus the lean system whereby factories deal directly with customers will result in cheaper products for everyone. There will be no need to predict demand levels thereby negating the need for predictive models for the demand structure provided by the likes of Google, Facebook, Twitter etc. Eventually only advertisers and trend builders will be needed to promote products. Today the biggest obstacle in achieving such a system is security issues. If hackers can hack into factories and start making robots perform wrong tasks, production will be jeopardized. Therefore security software must be developed or sourced from experienced anti-virus software developers, the likes of McAfee to couple with such a system.

2. Litreature Review

If two computers are connected to the same router, with the first (server) also connected to a PLC (Programmable Logic Controllers), GE (General Electric) WebView enables triggering the PLC from the second computer. But bringing this concept one step further, which is to trigger the PLC from a computer on the other side of town over the internet requires the factory to have a dedicated static IP address leased from the ISP (Internet service provider). This is costly and in some cases the ISP may not have IP address available for lease.

One way to get around this is to use Dynamic Domain Name Service (DDNS) through a provider like DynDNS.com (there are also other providers like TZO and DMOZ). This service is able to dynamically update DNS information as the IP address changes occur on the router. Most modern routers have built-in DDNS clients that support this function. Say a router is connected to a laptop and this laptop is connected to a PLC which controls robots in a factory. Upon signing to the DynDNS service provider, it keeps track of the changes in the public IP address of the router. On the DynDNS account, one can also define an available URL to point

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